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Anti-KCNN4 Antibody
Catalog # ABO10533

Specification

Anti-KCNN4 Antibody - Product Information

Application	**WB**
Primary Accession	O15554
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Intermediate conductance calcium-activated potassium channel protein 4(KCNN4) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-KCNN4 Antibody - Additional Information

Gene ID 3783

Other Names
Intermediate conductance calcium-activated potassium channel protein 4, SK4, SKCa 4, SKCa4, IKCa1, IK1, KCa3.1, KCa4, Putative Gardos channel, KCNN4, IK1, IKCA1, KCA4, SK4

Calculated MW
47696 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization
Membrane; Multi-pass membrane protein.

Tissue Specificity
Widely expressed in non-excitable tissues.

Protein Name
Intermediate conductance calcium-activated potassium channel protein 4

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the N-terminus of human KCNN4(14-29aa RRKRLLEQEKSLAGWA), different from the related mouse and rat sequences by two amino acids.

Purification

Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-KCNN4 Antibody - Protein Information

Name KCNN4 (HGNC:6293)

Synonyms IK1, IKCA1, KCA4, SK4

Function
Intermediate conductance calcium-activated potassium channel that mediates the voltage-independent transmembrane transfer of potassium across the cell membrane through a constitutive interaction with calmodulin which binds the intracellular calcium allowing its opening (PubMed:10026195, PubMed:10961988, PubMed:11425865, PubMed:15831468, PubMed:17157250, PubMed:18796614, PubMed:26148990, PubMed:9326665, PubMed:9380751, PubMed:9407042). The current is characterized by a voltage-independent activation, an intracellular calcium concentration increase-dependent activation and a single- channel conductance of about 25 picosiemens (PubMed:9326665, PubMed:9380751, PubMed:9407042). Also presents an inwardly rectifying current, thus reducing its already small outward conductance of potassium ions, which is particularly the case when the membrane potential displays positive values, above + 20 mV (PubMed:9326665, PubMed:9380751, PubMed:9407042). Controls calcium influx during vascular contractility by being responsible of membrane hyperpolarization induced by vasoactive factors in proliferative vascular smooth muscle cell types (By similarity). Following calcium influx, the consecutive activation of KCNN4 channel leads to a hyperpolarization of the cell membrane potential and hence an increase of the electrical driving force for further calcium influx promoting sustained calcium entry in response to stimulation with chemotactic peptides (PubMed:26418693). Required for maximal calcium influx and proliferation during the reactivation of naive T-cells (PubMed:17157250, PubMed:18796614). Plays a role in the late stages of EGF-induced macropinocytosis through activation by PI(3)P (PubMed:24591580).

Cellular Location

Cell membrane; Multi-pass membrane protein. Cell projection, ruffle membrane. Note=Targeted to membrane ruffles after EGF stimulation.

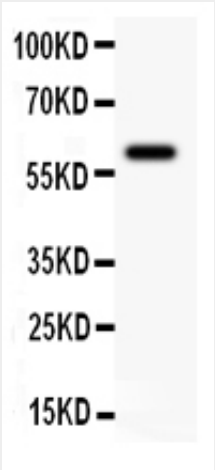
Tissue Location
Widely expressed in non-excitable tissues.

Anti-KCNN4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-KCNN4 Antibody - Images



Anti-KCNN antibody, ABO10533, Western blottingAll lanes: Anti KCNN(ABO10533) at 0.5ug/mlWB: HUT Whole Cell Lysate at 40ugPredicted bind size: 60KDObserved bind size: 60KD

Anti-KCNN4 Antibody - Background

Intermediate conductance calcium-activated potassium channel protein 1(KCNN4, Kca3.1) is part of a potentially heterotetrameric voltage-independent potassium channel that is activated by intracellular calcium. Activation is followed by membrane hyperpolarization, which promotes calcium influx. KCNN4 may be part of the predominant calcium-activated potassium channel in T-lymphocytes. This gene is similar to other KCNN family potassium channel genes, but it differs enough to possibly be considered as part of a new subfamily.